

AMENDMENTS TO THE CLAIMS

1-46. (canceled) /

47. (new) A process for producing composite
B1 metallic ultrafine particles with a core metal covered by a
protective layer, comprising:

providing a metal source having a metallic component
selected from the group consisting of a metallic salt, a
metallic oxide, and a metallic hydroxide,

providing an organic compound having a functional
group, wherein the organic compound has 4-22 carbon atoms, and

mixing the metal source and the organic compound in
nonaqueous state while heating the metal source and the
organic compound at a temperature at which the metal
components gather together to form the core metal, and the
functional group of the organic compound becomes bonded to a
surface of the core metal, thereby forming the core metal and
the protective layer made of the organic compound.

48. (new) A process for producing composite
metallic ultrafine particles according to claim 47, wherein
said functional group is selected from the group consisting of
alcohol hydroxyl, carboxyl, amino and amide groups.

49. (new) A process for producing composite metallic ultrafine particles with a core metal covered by a protective layer, consisting of:

1. providing a metal source having a metallic component selected from the group consisting of a metallic salt, a metallic oxide, and a metallic hydroxide,

providing an organic compound having a functional alcoholic hydroxy group, and

mixing the metallic salt and the organic compound in nonaqueous state while heating the metallic salt and the organic compound at a temperature at which the metal components gather together to form the core metal, and the alcoholic hydroxyl group of the organic compound becomes bonded to a surface of the core metal thereby forming the metal core and the protective layer of said organic compound.

50. (new) A composite metallic ultrafine particle comprising:

a core metal, made of a metal, having a diameter in a range of 1 to 100 nanometer,

a protective layer made of an organic compound having a functional group,

wherein the protective layer overlays a surface of the core metal and the functional group of the organic

compound is chemically bound by chemisorption to the surface of the core metal.

β/ 51. (new) A composite metallic ultrafine particle according to 50, wherein said functional group is selected from the group consisting of alcoholic hydroxyl, carboxyl, amino and amide groups.

52. (new) A composite metallic ultrafine particle according to claim 50, wherein said core metal and said protective layer is a reaction product of said organic compound and a metal compound selected from the group consisting of a metallic salt, a metallic oxide and a metallic hydroxide.

53. (new) A plurality of composite metallic ultrafine particles of substantially the same size, wherein said particles are particles in accordance with claim 50.

54 (New) A composite metallic ultrafine particle in accordance with claim 50 having a particle diameter no greater than about 20 nm.

55 (New) A composite metallic ultrafine particle in accordance with claim 50 having a particle diameter no greater than about 10 nm.

56. (New) A composite metallic ultrafine particle in accordance with claim 50 having a particle diameter in the range of 5 to 15 nm.

B) 57. (New) A composite metallic ultrafine particle according to claim 50 wherein said protective layer has a monomolecular layer thickness.

58. (New) A composite metallic ultrafine particle in accordance with claim 50 having a uniform diameter.

59. (New) The composite metallic ultrafine particle of claim 58 wherein said protective layer surrounds said core.

60. (new) The composite metallic ultrafine particle according to claim 52 wherein said functional group is alcoholic hydroxyl.

61. (new) A composite metallic ultrafine particle having a core metal covered by a protective layer produced by the steps, comprising:

providing a metal source having a metallic component selected from the group consisting of a metallic salt, a metallic oxide, and a metallic hydroxide,

providing an organic compound having a functional group, wherein the organic compound has 4-22 carbon atoms, and

β/ mixing the metal source and the organic compound in nonaqueous state while heating the metal source and the organic compound at a temperature at which the metal components gather together to form the core metal, and the functional group of the organic compound becomes bonded to a surface of the core metal, thereby forming the core metal and the protective layer made of the organic compound,

said composite metallic ultrafine particle being a reaction product between said metal source and said organic source.
